



# Boring Log

Boring #: LEV-2A

Sheet 1 of 2

Project: <b>BNSF Skykomish</b>		Operator: <b>Justin Aekaret</b>	Location: <b>Skykomish, WA</b>	
Project #: <b>BN050-16423-522</b>		Drill Rig Type: <b>Mini-Sonic</b>	Northing:	Easting:
Client: <b>BNSF</b>		Method: <b>Sonic Drilling</b>	Ground Elevation:	
Contractor: <b>Holt Drilling/Boart Longyear</b>		Casing ID: <b>6 inch</b>	Total Depth: <b>40'</b>	
Start Date & Time: <b>12/22/05 11:00</b>		Bit Type: <b>Tungsten Carbide</b>	Seal: <b>Hole Plug</b>	
Finish Date & Time: <b>12/22/05 12:30</b>		Boring ID: <b>4 inch</b>	Logged By: <b>Cliff Baines</b>	
Sample				Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)	
Soil and Rock Description				
Classification Scheme: <b>USCS/ASTM</b>				

0-5'	19"				0	Gravelly sand, SW, fine to coarse, trace fines, max clast 4", moist to wet, loose, no odor. 60% sand, 40% gravel, brownish.	0
5-10'					5		-1
							-2
							-3
							-4
							-5
							-6
							-7
							-8
							-9
							-10
10-15'	28"	10'	392		10	Grades to 60% sand, 40% gravel, moist, no odor, max clast size 4.5 inches, last 9" grades to more gray, moist to wet, some NAPL, odor	-11
							-12
							-13
							-14
							-15
							-16
							-17
							-18
							-19
							-20
							-21
							-22
							-23
							-24
							-25
15-20'	43"	17.5'	3,250		15	Same as last 9" above except 60% gravel, 40% sand for 19" then 6" silty and gravelly sand, brown, wet, very loose (soupy), no odor, sheen(?), then silt (ML) fine sandy to with sand, brown, stiff, some FeO staining, gravelly first 6"	-15
							-16
							-17
							-18
							-19
							-20
							-21
							-22
							-23
							-24
							-25
20-25'	44"	22.5'	188.4		20	34" of above silt, but sandy with fine sand interbeds and pockets, up to 70mm thick, micaceous, bottom of unit has 20 mm FeO stained bright red, fine sand, sharp contact with clay, CH with fine sand, high to medium plasticity, 90% clay, 10% sand, medium to dark gray, soft, wet, no odor.	-20
							-21
							-22
							-23
							-24
							-25
		25'	BDL		25		-25

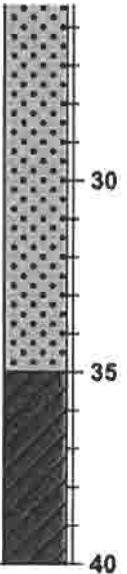
Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839		T = Total Rec (ft)			
		N = Native Rec (ft)			
		S = Slough Rec (ft)			



# Boring Log

Boring #: LEV-2A  
Sheet 2 of 2

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: <b>USCS/ASTM</b>	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

25-35'	37"	30'	BDL		30	Driller said he did 10' run 25 - 35', liner looks like it only has 30 - 35' - logged as such. 13" of silty fine sand, brown, 70% sand, 30% silt, wet, loose - very loose, no odor (SP), 6", fine to medium grained sand, trace coarse, wet, no odor., it - med brown, then gravelly sand, SW, fine - coarse, more plag & qz, wet, no odor, loose	-26
		32.5'	BDL				-27
		35'	BDL				-28
							-29
							-30
							-31
							-32
							-33
							-34
							-35
							-36
							-37
							-38
							-39
							-40
35-40'	23"	37.5'	234			14" gravelly and sandy silty-clay, ML - CL, very soft (soupy), 50% fines, 30% gravel, 20% sand, wet, no odor. Gray-brown, then 9" gravelly sand, SW, fine to coarse, reddish-tan color, loose, wet, no odor, clasts to 2", soupy could be slough.	-36
		40'	94.7				-37
							-38
							-39
							-40

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839		T = Total Rec (ft)			
		N = Native Rec (ft)			
		S = Slough Rec (ft)			



# Boring Log

Boring #: LEV-4A  
Sheet 1 of 2

Project: <b>BNSF Skykomish</b>				Operator: <b>Justin Aekaret</b>		Location: <b>Skykomish, WA</b>		
Project #: <b>BN050-16423-522</b>				Drill Rig Type: <b>Mini-Sonic</b>		Northing:                      Easting:		
Client: <b>BNSF</b>				Method: <b>Sonic Drilling</b>		Ground Elevation:		
Contractor: <b>Holt Drilling/Boart Longyear</b>				Casing ID: <b>6 inch</b>		Total Depth: <b>35'</b>		
Start Date & Time: <b>12/22/05 8:50</b>				Bit Type: <b>Tungsten Carbide</b>		Seal: <b>Hole Plug</b>		
Finish Date & Time: <b>12/22/05 10:15</b>				Boring ID: <b>4 inch</b>		Logged By: <b>Cliff Baines</b>		
Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: <b>USCS/ASTM</b>		Elevation (ft-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)					

0-5'	26"				0	Gravelly sand, SW, fine to coarse, trace fines, max clast 4", moist to wet, loose, no odor. 60% sand, 40% gravel, brownish.	0
5-10'	26"				5	same as above, grades to 5% fines, 60% sand, 35% gravel, 20% recovered	-1
		10'	BDL		10	Sandy gravel, GP, 60% gravel, 40% sand, moist to wet, no odor., trace fines, broken cobbles (large gravel)	-2
10-15'	19"				15	same as above but wet, NAPL, odor, max clast 5.5"	-3
15-20'	19"	17.5'	5,050		20	same as above, 70% gravel, 30% sand for 29", 3" fine to coarse gravelly sand, brown, 60% sand, 40% gravel, then clay, CH, brown-gray, high plasticity, fine sand stringers, thinkly bedded to varved, no odor, moist to wet, medium stiff	-4
20-25'	36"	22.5'	4,030		25		-5
		25'	763				-6

Remarks and Datum Used:	Notes	Groundwater		
		Date	Time	Depth (ft.)
<b>The RETEC Group, Inc.</b> 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839	T = Total Rec (ft)			
	N = Native Rec (ft)			
	S = Slough Rec (ft)			



# Boring Log

Boring #: LEV-4A

Sheet 2 of 2

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

25-35'	19"	27.5'	21.7		30	Sandy gravel, GP, sand fine to coarse, gravel to 3", 60% gravel, 40% sand, then clay, CL-CH, very soft, wet, blue gray-tan-tan, soupy, no odor.	-26
		30'	BDL				-27
		32.5'	85.2				-28
		35'	23.7				-29
							-30
							-31
							-32
							-33
							-34
							-35

Remarks and Datum Used:	Notes	Groundwater		
		Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839	T = Total Rec (ft)			
	N = Native Rec (ft)			
	S = Slough Rec (ft)			





# Boring Log

Boring #: LEV-5C

Sheet 1 of 2

Project: <b>BNSF Skykomish</b>	Operator: <b>Justin Aekaret</b>	Location: <b>Skykomish, WA</b>
Project #: <b>BN050-16423-522</b>	Drill Rig Type: <b>Mini-Sonic</b>	Northing:      Easting:
Client: <b>BNSF</b>	Method: <b>Sonic Drilling</b>	Ground Elevation:
Contractor: <b>Holt Drilling/Boart Longyear</b>	Casing ID: <b>6 inch</b>	Total Depth: <b>35'</b>
Start Date & Time: <b>12/21/05 1330</b>	Bit Type: <b>Tungsten Carbide</b>	Seal: <b>Hole Plug</b>
Finish Date & Time: <b>12/21/05 1615</b>	Boring ID: <b>4 inch</b>	Logged By: <b>Stephen Howard</b>

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: <b>USCS/ASTM</b>	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

0-5'					0	Gravelly sand (SW), brown, moist, no odor or visual contamination, 45% gravel, angular to sub-angular to 1.5 inch clast; 45% sand, fine to coarse, angular to sub-angular; 10% silt. Cobbles at surface 1'	0
5-10'					5	Poor recovery, hit boulder. Recovered sample as above. One cobble present.	-1
10-15'		10'	BDL		10	As above, moist, brown, no odor or visual contamination, root fragments	-2
15-20'		15'	33,500		15	Black stained sandy gravel (GW). 75% gravel, sub rounded to rounded, fine to coarse; 25% sand, medium to coarse, angular to sub-angular, strong odor, NAPL staining throughout	-3
20-25'		17.5'	8,530		17.5	Water Table at 17'. Gravel, medium to coarse, gray, sub-angular - rounded, some NAPL staining	-4
		20'	18,030		20	As above with trace sand. 20% brown silt (slurry)	-5
		22.5'	242		22.5	NAPL saturated material; Gravelly sand (SW). 25% gravel, angular to rounded, fine to coarse, equant to elongate; 70% sand, coarse, angular; 5% silt	-6
		25'	BDL		25	As above. NAPL spotting	-7
						Cobbly gravel, GW, gray, moderate odor. 15% cobble, 75% gravel, fine to coarse; 10% sand, trace silt. Becoming more sandy toward base. 10% silt, 65% sand, 25% gravel	-8
						Brown sand, SW, gravelly, slightly silty, no odor or visual contamination.	-9

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc.		T = Total Rec (ft)			
1011 SW Klickitat Way, Suite 207		N = Native Rec (ft)			
Seattle, WA 98134-1162		S = Slough Rec (ft)			
Phone: (206) 624-9349					
Fax: (206) 624-2839					



# Boring Log

Boring #: LEV-5C  
Sheet 2 of 2

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

25-30'		27.5'	BDL		30	Gravel, fine to coarse, sub rounded to rounded. 80% sand, fine; 2% silt.	-26
		30'	BDL			Gray hard dry friable/brittle sandy gravel, SW. Appearance of weathered diorite. Slight odor. No visual contamination. Hard coarse gravel clasts present. 50% gravel, 30% sand, 20% silt. Dense.	-27
30-35'					35	Brown, wet, gravelly sand. 10% gravel, sub rounded, med (1-inch); 89% sand, med; 1% silt. One cobble present. Occasionally more silty (10%). No odor or visual contamination.	-28
						As above. Slight odor.	-29
		32.5'	BDL			Clay, slightly silty, gray to orange/brown, firm	-30
						Silt, slightly clayey, brown, no odor or visual contamination	-31
		35'	BDL			As above becoming sandy w/ fine sand. Very slight odor	-32
							-33
							-34
							-35

Remarks and Datum Used:	Notes	Groundwater		
		Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Killickit Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839	T = Total Rec (ft)			
	N = Native Rec (ft)			
	S = Slough Rec (ft)			



# Boring Log

Boring #: LEV-6A

Sheet 1 of 2

Project: <b>BNSF Skykomish</b>	Operator: <b>Justin Aekaret</b>	Location: <b>Skykomish, WA</b>
Project #: <b>BN050-16423-522</b>	Drill Rig Type: <b>Mini-Sonic</b>	Northing:                      Easting:
Client: <b>BNSF</b>	Method: <b>Sonic Drilling</b>	Ground Elevation:
Contractor: <b>Holt Drilling/Boart Longyear</b>	Casing ID: <b>6 inch</b>	Total Depth: <b>45'</b>
Start Date & Time: <b>12/21/05 845</b>	Bit Type: <b>Tungsten Carbide</b>	Seal: <b>Hole Plug</b>
Finish Date & Time: <b>12/21/05 1230</b>	Boring ID: <b>4 inch</b>	Logged By: <b>Stephen Howard</b>

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: <b>USCS/ASTM</b>	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

0-5'					0	Sandy gravel, GW, moist, brown, abundant plant matter at top, no odor or visual contamination. 5% cobble, 50% gravel, fine to coarse, subangular to rounded; 40% sand, 5% fines	0
5-10'					5	As above. Finer, more woody debris, no odor or visual contamination, 25% gravel, fine to coarse, angular to sub-rounded; 65% sand, angular - subrounded; 10% silt, occasional cobble	-1
10-15'		10'	BDL		10	Silty, gravelly sand (SW), brown, moist, no odor or visual contamination, 5% cobbles to 15 cm, 20% sand, sub-angular to sub-rounded; 55% sand, very fine to fine; 20% silty, trace wood debris. At base is a woody horizon ~1 inch - 100% wood.	-2
15-20'		15'	109.3		15	Gray, gravelly sand (SW), no odor or visual contamination, abundant wood fragments in upper foot (~20%), little wood below. Some bodies of organic-rich brown, soft silty, otherwise, 70% sand, fine to coarse; 25% gravel, angular to sub-rounded, 1-inch diameter. Silt gray. Abundant carbonaceous black specks.	-3
20-25'		17.5'	BDL		17.5	Gravelly sand, SW, Gray, wet, no odor or visual contamination. 10% cobbles to 15 cm, 10% gravel, fine to medium, sub-angular to sub-rounded; 78% sand, medium to coarse; 2% silt	-4
		20'	BDL		20	Sand, SP, 100%, fine to medium, angular to sub-rounded, brown, no odor or visual contamination, wet	-5
		22.5'	BDL		22.5	Silt, medium soft, low plasticity, upper 8" oxidized orange/brown layers. Brown below. No clay. 100% silt. No odor or visual contamination	-6
		25'	BDL		25	As above w/ trace fine micaceous sand,	-7
						Sand, gravelly, brown-bray, no odor or visual contamination, sub-rounded to rounded, gravel, angular to sub-angular sand. 20% gravel, 80% sand,	-8

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc.		T = Total Rec (ft)			
1011 SW Klickitat Way, Suite 207		N = Native Rec (ft)			
Seattle, WA 98134-1162		S = Slough Rec (ft)			
Phone: (206) 624-9349					
Fax: (206) 624-2839					



# Boring Log

Boring #: LEV-6A

Sheet 2 of 2

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

25-30'		27.5'	BDL		30	no fines	-26
						Brown, very fine micaceous sand, 100% wet, soft, almost fine enough to be a silt. No odor or visual contamination	-27
30-35'		30'	BDL		35	Silt, brown, soft, low plasticity, 100% silt, no odor or visual contamination	-28
						Silty, soft to firm, gray to brown/orange, no odor or visual contamination	-29
35-40'		32.5'	BDL		40	Silt, sandy, brown, soft, no odor or visual contamination, ~60% sand, low plasticity	-30
						Gravel, sandy, GW, brown, moist, 85% gravel fine to coarse, sub-angular to sub-rounded, 10% sand, 5% silt, no odor or visual contamination	-31
40-45'		35'	BDL		45	50% recovery. Brown, moist, no odor or visual contamination. Gravelly sandy silt. 15% cobbles, 10% gravel rounded to subrounded; 50-60% sand, fine to coarse; 15-25% silt.	-32
		37.5'	BDL			Cobble zone, no odor or visual contamination. Rounded cobbles ~10cm diameter. Highly weathered, granitic, breaks easily in the hand mainly. Approximately 30% of cobbles are hard	-33
		40'	BDL				-34
		42.5'	BDL				-35
							-36
							-37
							-38
							-39
							-40
							-41
							-42
							-43
							-44
							-45

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839		T = Total Rec (ft)			
		N = Native Rec (ft)			
		S = Slough Rec (ft)			





# Boring Log

Boring #: LEV-7A

Sheet 1 of 2

Project: <b>BNSF Skykomish</b>				Operator: <b>Justin Aekaret</b>		Location: <b>Skykomish, WA</b>		
Project #: <b>BN050-16423-522</b>				Drill Rig Type: <b>Mini-Sonic</b>		Northing:                      Easting:		
Client: <b>BNSF</b>				Method: <b>Sonic Drilling</b>		Ground Elevation:		
Contractor: <b>Holt Drilling/Boart Longyear</b>				Casing ID: <b>6 Inch</b>		Total Depth: <b>35'</b>		
Start Date & Time: <b>12/20/05 1320</b>				Bit Type: <b>Tungsten Carbide</b>		Seal: <b>Hole Plug</b>		
Finish Date & Time: <b>12/20/05 1505</b>				Boring ID: <b>4 Inch</b>		Logged By: <b>Cliff Baines</b>		
Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: <b>USCS/ASTM</b>		Elevation (ft-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)					

0-5'					0	Same as 8B but approximately 5 to 10% fines	0
					1		-1
					2		-2
					3		-3
					4		-4
					5		-5
5-10'					6	Same as 8B except no wood fragments or black staining, possibly increased moisture at bottom. Poor recovery caused by 4" spherical gravel	-6
					7		-7
					8		-8
					9		-9
					10		-10
10-15'		10'	3,233		11	Broken gravel, wood fragments and a jagged piece of metal, then clayey/silty sandy gravel, GM - GC, 40% gravel, 30% sand, 30% fines. Sand medium gray, gravel to 20 mm, Non plastic to low plasticity, soft, moist to wet, no odor or visual contamination	-11
					12		-12
					13		-13
					14		-14
					15		-15
		15'	4,570		16	Probably same as above, mixture of clay, gravel, sand, GC to CH, 19" thick, variable % clay throughout, some portions organic rich, almost OH, NAPL and odor present, gravel to 4" med dark gray, clay very soft, Low to high plasticity, sharp contact w/ fine sand, SP, grayish red, moist to wet, medium density, no odor, no NAPL, micaceous, massive. NAPL ends at sand.	-16
					17		-17
15-20'		17.5'	3,210		18		-18
					19		-19
					20		-20
		20'	BDL		21	Same sand as above	-21
					22		-22
20-25'		22.5'	17.4		23		-23
					24		-24
					25		-25
		25'	BDL				

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
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		S = Slough Rec (ft)			



# Boring Log

Boring #: LEV-7A

Sheet 2 of 2

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

25-30'		27.5'	BDL		30	17" of clay, CL, medium gray, low plasticity, no odor, wet, soft, grades to very soft and pale red, last 6" is silty to clayey fine sand, SC - SM, 80% sand, 20% fines, LP - NP, pale red, loose.	-26
		30'	259				-27
30-35'		32.5'	BDL		35	~3" sand, clay, gravel mixture, then ~ 3" clay, CL, pale red, soft, then ~ 3" sand as at LEV8B near 20', then ~ 20" clay, CL, variegated coloring in bedding up to 1/2" thick, gray to reddish (brownish), low plasticity, no odor, wet, soft, grades gray and stratified with partings and seams last 7", then silty fine sand, SM, wet, (wetter), strong FeO staining, ~3" thick, then clayey sand last 3", CL, low plasticity, soft, wet, pale red.	-28
		35'	BDL				-29
							-30
							-31
							-32
							-33
							-34
							-35

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839		T = Total Rec (ft)			
		N = Native Rec (ft)			
		S = Slough Rec (ft)			



# Boring Log

Boring #: LEV-8A

Sheet 1 of 2

Project: <b>BNSF Skykomish</b>				Operator: <b>Justin Aekaret</b>		Location: <b>Skykomish, WA</b>		
Project #: <b>BN050-16423-522</b>				Drill Rig Type: <b>Mini-Sonic</b>		Northing:                      Easting:		
Client: <b>BNSF</b>				Method: <b>Sonic Drilling</b>		Ground Elevation:		
Contractor: <b>Holt Drilling/Boart Longyear</b>				Casing ID: <b>6 inch</b>		Total Depth: <b>35'</b>		
Start Date & Time: <b>12/19/05 1515</b>				Bit Type: <b>Tungsten Carbide</b>		Seal: <b>Hole Plug</b>		
Finish Date & Time: <b>12/19/05 1600</b>				Boring ID: <b>4 inch</b>		Logged By: <b>Stephen Howard</b>		
Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: <b>USCS/ASTM</b>		Elevation (ft-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)					

0-5'						SW, Brown moist, no odor or visual contamination: 0 - 3.5 ft, 20% gravel, fine to coarse; 75% sand, fine to coarse, 5% silt. 3.5 - 5ft as above with finer gravel; 15% gravel fine to medium; 80% sand, fine to coarse, 5% silt	0
							-1
							-2
							-3
							-4
							-5
5-10'						GW, 60% gravel, fine to coarse, ~38% sand, fine to coarse, 2% silt	-6
							-7
						As above with 30% gravel, 65% sand, 5% silt. Brown, moist, no odor or visual sign of contamination	-8
							-9
		10'	155.6			Peat layer, dark brown, no odor	-10
						Sand, SP, 100%, fine, no odor or visual contamination	-11
10-15'						Moist, brown, no odor or visual contamination, 20% gravel, fine to coarse; 70% sand, 10% silt	-12
							-13
		15'	2,740			Dry, pale, broken rock. 5% cobbles, 15% gravel, 65% sand, 15% silt. No odor or visual contamination	-14
							-15
						40% gravel, 50% sand, 10% silt, moist, no odor or visual contamination above 17'. Odor 17 - 19 ft.	-16
							-17
15-20'		17.5'	5,800				-18
							-19
		20'	11.9			Water table at 20 ft. Lithology as above. Strong odor to 20'	-20
							-21
20-25'		22.5'	BDL			50% recovery. 50% sand, coarse, 50% gravel, fine, some NAPL, strong odor. Boulder reported by driller at 25'	-22
							-23
							-24
		25'	BDL				-25

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839		T = Total Rec (ft)			
		N = Native Rec (ft)			
		S = Slough Rec (ft)			



# Boring Log

Boring #: LEV-8A

Sheet 2 of 2

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

25-30'		27.5'	12.9				-26
							-27
							-28
							-29
		30'	BDL		30	Gravel, 50% fine to coarse, brown, wet, 10% cobbles, 25% sand (fine to coarse), 15% silt, no odor or visual contamination	-30
							-31
							-32
							-33
30-35'		32.5'	BDL				-34
							-35
		35'	BDL		35	Clay, brown, soft to firm, no odor or visual contamination, slightly sandy, silty	-35

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839		T = Total Rec (ft)			
		N = Native Rec (ft)			
		S = Slough Rec (ft)			





# Boring Log

Boring #: LEV-8B

Sheet 1 of 2

Project: <b>BNSF Skykomish</b>				Operator: <b>Justin Askaret</b>		Location: <b>Skykomish, WA</b>		
Project #: <b>BN050-16423-522</b>				Drill Rig Type: <b>Mini-Sonic</b>		Northing:                      Easting:		
Client: <b>BNSF</b>				Method: <b>Sonic Drilling</b>		Ground Elevation:		
Contractor: <b>Holt Drilling/Boart Longyear</b>				Casing ID: <b>6 inch</b>		Total Depth: <b>35'</b>		
Start Date & Time: <b>12/20/05 0950</b>				Bit Type: <b>Tungsten Carbide</b>		Seal: <b>Hole Plug</b>		
Finish Date & Time: <b>12/20/05 1230</b>				Boring ID: <b>4 inch</b>		Logged By: <b>Cliff Baines</b>		
Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: <b>USCS/ASTM</b>		Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)					

0-5'					0	Gravelly sand, SW, 60% sand, 40% gravel, trace fines, sand is fine to coarse, gravel to 4", subangular to subrounded, pale yellowish brown, loose, moist, no odor, some roots & grass	0
					5	Grades to 20% gravel, 20% silt, light olive gray, max clast 5", loose - very loose	-1
5-10'					10	hard drilling, driller says boulder. Core has gravel and gravel fragments, then as 5-8 except higher moisture content, black organic staining, wood fragments, possible odor, fines, slightly more plastic	-2
		10'	BDL		15	Gravelly sand, SW, as at 1-5', sharp contact with sand (SP), trace fines, fine to medium, trace coarse, loose, no odor, moist, dark yellow/orange, no gravel.	-3
10-15'					20	6" silty sand with gravel, SM, 60% sand, 30% silt, 10% gravel, to 30mm, sand fine to coarse, fines, low plasticity to no plasticity (slightly clayey) medium gray, slight HC odor, loose, moist to wet, then 20" sandy gravel, GP, trace fines, medium gray to light gray, sand fine to coarse, 60% gravel, 40% sand, clasts to 5", loose, odor, NAPL in pores and on clast surface, wet, last 6" grades less NAPL, then gravelly sand, SW, 80% sand, 10 - 20% gravel to 50mm, med-light gray, no odor, wet, loose.	-4
15-20'		17.5'	1,745		25	above sand continues for 16", frequent plagioclase grains, no odor, no staining, then grades gravelly with 30% gravel to 5" size, then 5" sand with gravel, SP, fine to medium, trace, coarse gravel to 20 mm, 90% sand, 10% gravel, increased fines, 25%, wet, no odor, loose - medium dense, then 11" gravelly sand, SW, fine to coarse, 80% sand, 20% gravel to 3". Last 6" is silty to clay, ML-CL, trace gravel to 15mm and sand, LP to NP, soft, reddish brown, with FeO staining, moist to wet, occasional organics.	-5
20-25'		20'	5,610				-6
		25'	114.6				-7
							-8
							-9
							-10
							-11
							-12
							-13
							-14
							-15
							-16
							-17
							-18
							-19
							-20
							-21
							-22
							-23
							-24
							-25

Remarks and Datum Used:		Notes T = Total Rec (ft) N = Native Rec (ft) S = Slough Rec (ft)	Groundwater		
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839			Date	Time	Depth (ft.)





# Boring Log

Boring #: LEV-8B

Sheet 2 of 2

Sample				Graphic Log	Depth (ft.)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft.-msl)
Depth Range (ft.)	Recovery	Depth (ft.)	NWTPH-Dx (mg/Kg)				

25-30'					30	~2' of gravelly sand with clay, SC, 60% sand, 30% gravel, 10% clay, wet, no odor, gray, loose, clay then increases to 30%, sand 60% gravel 19%. Clay is H.P., reddish gray, no odor, wet, clay is soft then gravelly silty, grading to silt, moderate plasticity to non-plastic, mottling colors from gray to reddish (oxide?), med stiff, moist, no odor.	-26
		30'	18.1				-27
30-35'					35	silt as above but laminations visible, last 6" is gray, no mottling and low plasticity, could be clay but shows dilatency, moist to wet	-28
		32.5'	BDL				-29
		35'	65				-30
							-31
							-32
							-33
							-34
							-35

Remarks and Datum Used:		Notes	Groundwater		
			Date	Time	Depth (ft.)
The RETEC Group, Inc. 1011 SW Klickitat Way, Suite 207 Seattle, WA 98134-1162 Phone: (206) 624-9349 Fax: (206) 624-2839		T = Total Rec (ft)			
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